REMARKS/ARGUMENTS

The Applicants originally submitted Claims 1-21 in the application. In a previous response, the Applicants amended independent Claims 1 and 11. In the present response, the Applicants have not amended, canceled, or added any claims. Accordingly, Claims 1-21 are currently pending in the application.

I. Rejection of Claims 1-21 under 35 U.S.C. §103

The Examiner has rejected Claims 1-21 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,463,977 to Manada, *et al.* ("Manada") in view of U.S. Patent No. 5, 466,934 to Adams, *et al.* ("Adams"). The Applicants respectfully disagree.

The Examiner asserts that Manada teaches a subsystem that analyzes crystallographic information of a material but that Manada differs from the instant claims in the crystallographic measurements of the material. To cure this deficiency of Manada, the Examiner cites Adams to teach measuring crystallographic properties that Manada does not teach. (*See* Final Rejection of December 12, 2007, pages 2-3.) Manada teaches a method of and an apparatus for epitaxially growing a uniform chemical compound crystal without any defects induced from emission of a high energy electron beam to the surface of the crystal. (*See*, for example, column 1, lines 50-67.) Furthermore, Manada teaches that it is necessary to align a direction of a crystal axis and a direction of a high-energy electron beam with each other to grow the crystal which makes it impossible to grow the crystal while rotating the crystal substrate. (*See*, for example, column 2, lines 59-62.) Thus, Manada explicitly teaches to avoid using an electron beam to measure epitaxial thickness so as

to prevent introducing defects into a crystalline material and to allow epitaxial crystal growth through rotation of a crystal substrate.

Adams teaches measuring crystallographic information, specifically identifying crystallographic defects, with an imaging apparatus 10 which incorporates a conventional scanning electron microscope (SEM) 12. SEM 12 includes a SEM control unit 14 coupled to an electron beam generator 16 to direct the electron beam generator 16 to discharge a focused electron beam 18 which bombards a material sample 24. (*See*, for example, column2, line 66, through column 3, line 8 and Figure1.) Thus, Adams teaches using an electron beam to measure crystallographic defects in a material sample. The Examiner states it would have been obvious to one of ordinary skill in the art to modify Manada by the teachings of Adams to measure more than thickness. (*See* Final Rejection of December 12, 2007, page 3.) However, modifying Manada with Adams to measure more than crystal thickness, as the Examiner cites, would render Manada unsatisfactory for its intended purpose since Manada explicitly teaches that use of an electron beam to measure crystal thickness induces defects in the crystal and does not allow for rotating a crystal substrate to grow an expitaxial layer on it, which Manada is directed to.

MPEP §2143.01 states that "If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). As such, the cited combination of Manada and Adams, as applied by the Examiner, does not establish a *prima facie* case of obviousness of independent Claims 1 and 11 and Claims that depend

thereon. Accordingly, the Applicants respectfully request the Examiner to withdraw the §103(a) rejection of Claims 1-21 and allow issuance thereof.

II. Conclusion

In view of the foregoing remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of Allowance for Claims 1-21.

The Applicants request the Examiner to telephone the undersigned agent of record at (972) 480-8800 if such would further or expedite the prosecution of the present application. The Commissioner is hereby authorized to charge any fees, credits or overpayments to Deposit Account 08-2395.

Respectfully submitted,

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